

**6BY6****PENTAGRID AMPLIFIER**

MINIATURE TYPE

6BY6**GENERAL DATA****Electrical:**

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts

Current 0.3 amp

Direct Interelectrode Capacitances:*

Grid No.1 to Plate 0.08 max. μf Grid No.3 to Plate 0.35 max. μf Grid No.1 to Grid No.3 0.15 max. μf Grid No.1 to All Other Electrodes
and Heater 5.4 μf Grid No.3 to All Other Electrodes
and Heater 6.9 μf Plate to All Other Electrodes
and Heater 7.6 μf **Characteristics, Class A₁ Amplifier:**

Plate Voltage 250 volts

Grids-No.2-and-No.4 Voltage 100 volts

Grid-No.3 Voltage -2.5 volts

Grid-No.1 Voltage -2.5 volts

Grid-No.3-to-Plate Transconductance 500 μmhos Grid-No.1-to-Plate Transconductance 1900 μmhos

Plate Current 6.5 ma

Grids-No.2-and-No.4 Current 9 ma

Grid-No.3 Volts (Approx.) for plate
current of 35 μamp and grid-No.1
volts = -4 -15 voltsGrid-No.1 Volts (Approx.) for plate
current of 35 μamp and grid-No.3
volts = 0 -12 volts**Mechanical:**

Mounting Position Any

Maximum Overall Length 2-1/8"

Maximum Seated Length 1-7/8"

Length from Base Seat to Bulb Top
(Excluding tip) 1-1/2" \pm 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

Base Small-Button Miniature 7-Pin (JETEC No.E7-1)

BOTTOM VIEW

Pin 1: Grid No.1

Pin 2: Cathode,
Grid No.5

Pin 3: Heater

Pin 4: Heater



Pin 5: Plate

Pin 6: Grid No.2,
Grid No.4

Pin 7: Grid No.3

*: With no external shield.

MARCH 1, 1954

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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PENTAGRID AMPLIFIER

GATED AMPLIFIER SERVICE

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE	300 max. volts
GRIDS-No.2-and-No.4 VOLTAGE	See Rating Curve at front of this Section
GRIDS-No.2-and-No.4 SUPPLY VOLTAGE	300 max. volts
GRID-No.3 SUPPLY VOLTAGE:	
Negative Bias Value	50 max. volts
Positive Bias Value	0 max. volts
Positive Peak Value	25 max. volts
GRID-No.1 SUPPLY VOLTAGE:	
Negative Bias Value	100 max. volts
PLATE DISSIPATION	2 max. watts
GRID-No.3 INPUT	0.1 max. watt
GRIDS-No.2-and-No.4 INPUT	1 max. watt
GRID-No.1 INPUT	0.1 max. watt
PEAK HEATER-CATHODE VOLTAGE:	
Heater negative with respect to cathode	200 max. volts
Heater positive with respect to cathode	200* max. volts

Characteristics as Sync Separator and Sync Clipper:

Plate Voltage	10	volts
Grid-No.3 Voltage	0	volts
Grids-No.2-and-No.4 Voltage	25	volts
Grid-No.1 Voltage	0	volts
Plate Current	1.4	ma
Grids-No.2-and-No.4 Current	3.5	ma
Grid-No.3 Bias Volts (Approx.) for plate voltage of 25 volts, grids-No.2-and-No.4 voltage of 25 volts, grid-No.1 voltage of 0 volts, and plate current of 50 μ amp		
	-2.5	volts
Grid-No.1 Bias Volts (Approx.) for plate voltage of 25 volts, grids-No.2-and-No.4 voltage of 25 volts, grid-No.3 voltage of 0 volts, and plate current of 50 μ amp		
	-2.3	volts

Maximum Circuit Values:

Grid-No.1 or Grid-No.3-Circuit Resistance:	
For fixed-bias operation	0.5 max. megohm
For cathode-bias operation	1.0 max. megohm

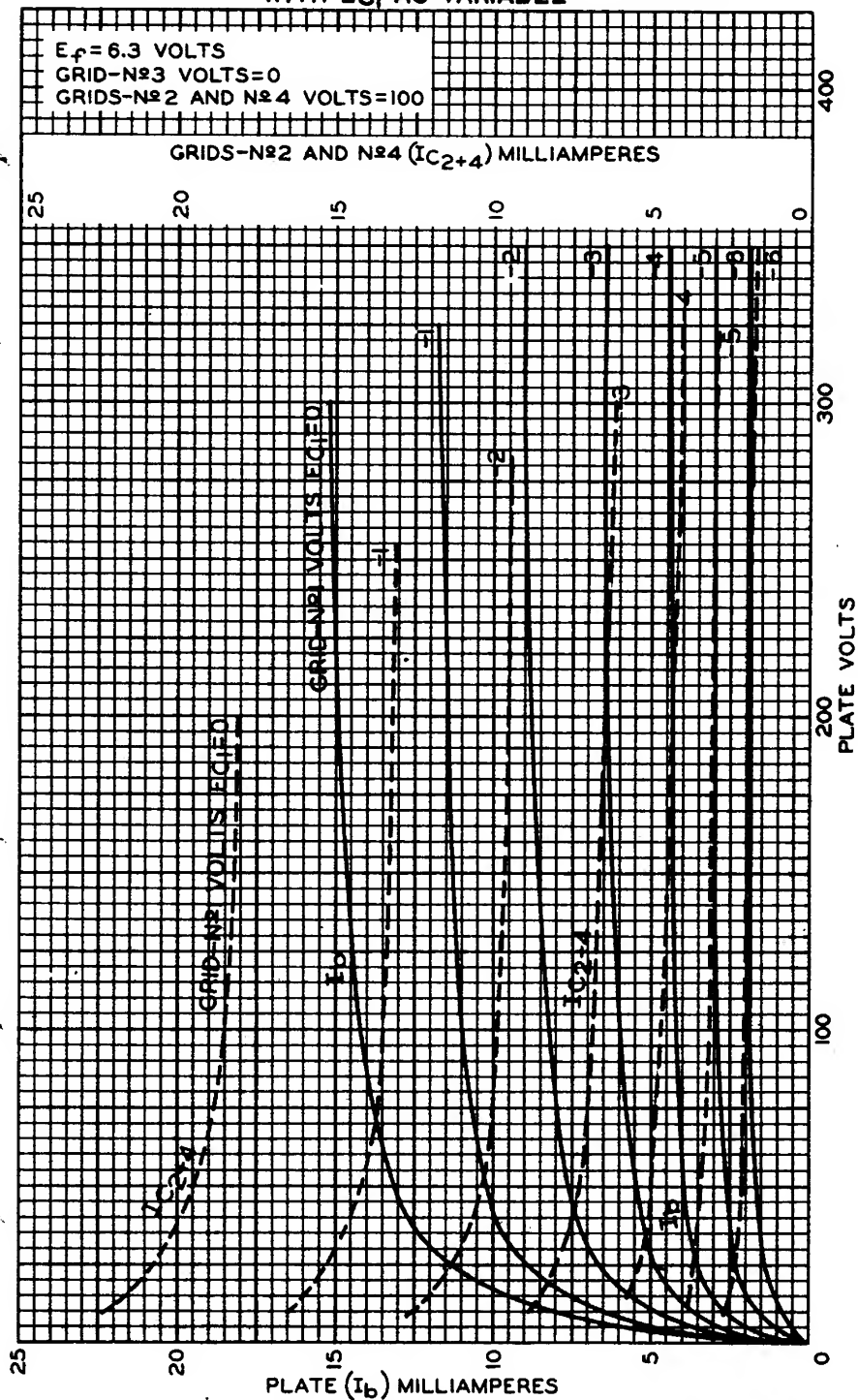
* The dc component must not exceed 100 volts.



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AVERAGE OPERATION CHARACTERISTICS
WITH E_{C1} AS VARIABLE

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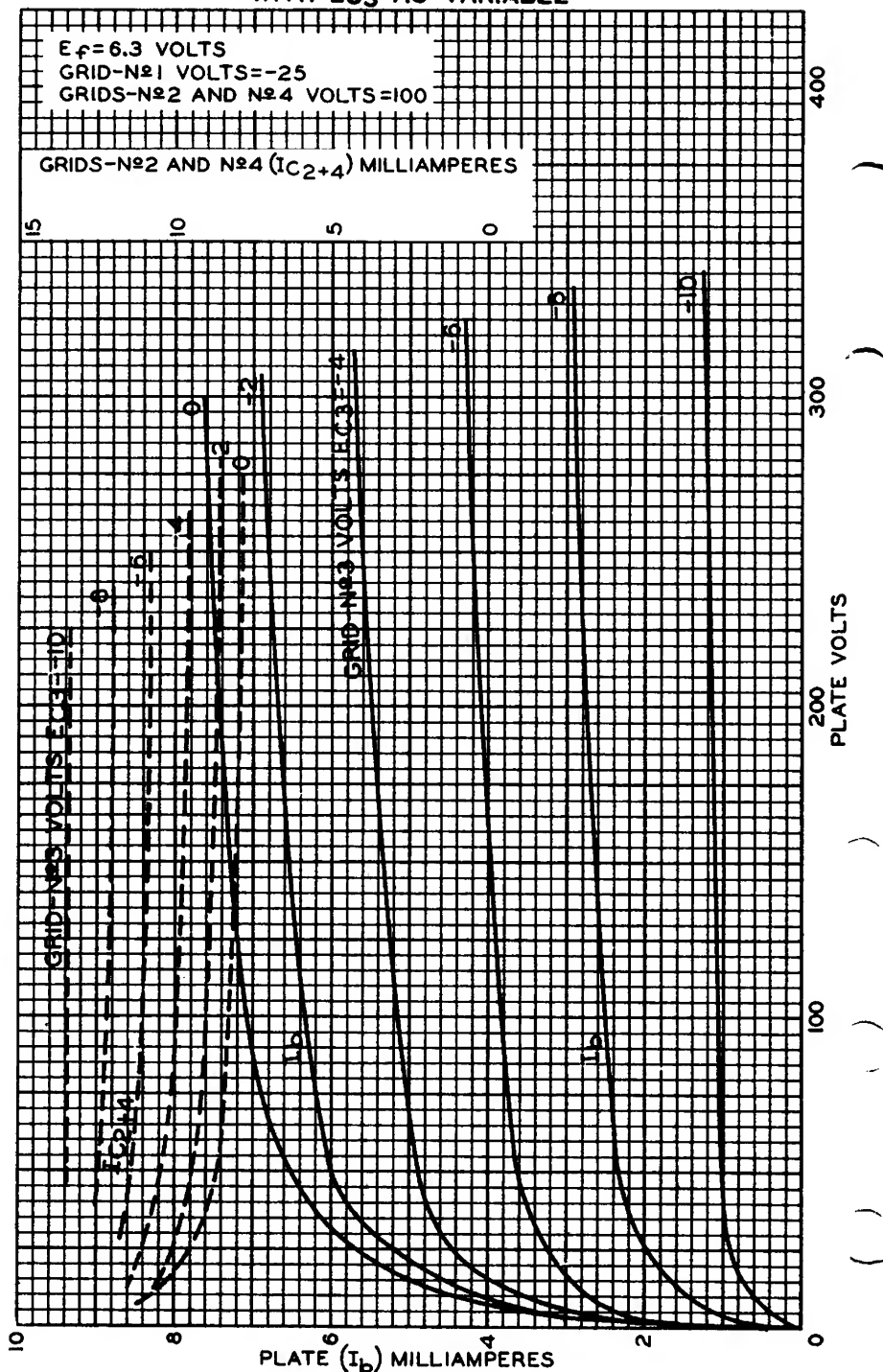
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AVERAGE OPERATION CHARACTERISTICS WITH EC_3 AS VARIABLE



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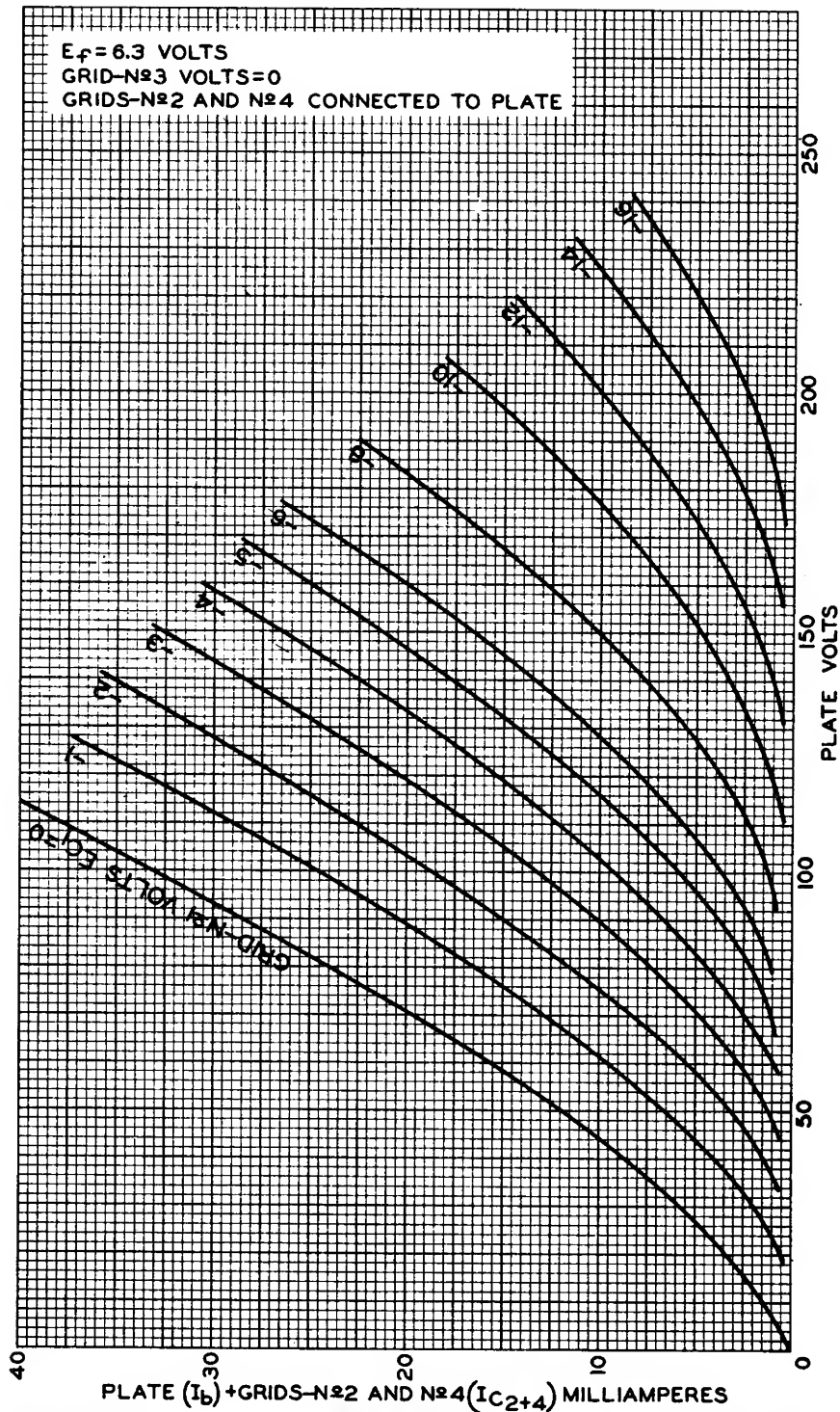
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AVERAGE PLATE CHARACTERISTICS



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